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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/826,882	04/16/2004	Juha Rasanen	915-007.085	9884

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EXAMINER
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LAI, DANIEL

ART UNIT	PAPER NUMBER
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2617

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/07/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

# Office Action Summary

Application No.

10/826,882

Applicant(s)

RASANEN ET AL.

Examiner

Daniel Lai

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 16 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 5-26 and 28-30 is/are rejected.
- 7) ☒ Claim(s) 3, 4 and 27 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 April 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 10826882.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "higher-delay network is at least partially based on the Internet Protocol (IP) or a satellite connection" of claim 19 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Objections***

2. Claims 7 and 22 are objected to because of the following informalities: There is lack of antecedent basis for "the Radio Link Protocol (RLP)" from the parent claim(s). Appropriate

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correction is required. It appears the claims are meant to be "said protocol is a Radio Link Protocol (RLP)" and for examination purposes will be treated thus.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 10, 11 and 28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 10 recites the limitation "said first step of checking..." in line 31 of page 27. There is insufficient antecedent basis for this limitation in the claim.

Claim 11 inherits the deficiencies from claim 10, and further recites the limitation "said second step of checking..." in line 10 of page 28. There is insufficient antecedent basis for this limitation in the claim.

Claim 28 recites the limitation "a computer program product" in page 32, line 23. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 101***

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 28 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Examples of acceptable language in computer-processing related claims are:

computer readable medium encoded with

- a. a computer program
- b. software
- c. computer executive instructions
- d. instructions capable of being executed by a computer

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1,2,5-7,12,13,16,21,26,29 and 30 are rejected under 35 U.S.C. 102(b) as being anticipated by WO 01/65881, hereinafter WO'881.

Regarding claim 1, WO'881 discloses negotiation of parameters for use in the operation of a protocol that controls data transmission between first Communication Units (CU) and third CU via second CUs (Background of the Invention, where WO'881 discusses standards; Summary of the Invention; p. 13, line 20-23). WO'881 discloses the protocol is operated by protocol entities in the first and third CUs (p. 3, line 4-8). A first CU is always associated with a second CU and the second CU is always associated with a third CU at a time (a mobile always associated with a base station and the base station always associated with a (Mobile Switching Center) MSC at a time). WO'881 discloses there exist second CUs of at least a first and second type and third CUs of at least a first and second type that require different choices of said parameter (p. 7, line 13-p. 8, line 22). WO'881 further discloses when an existing association of said first CU with a former second CU is changed to an association of said first CU with a new second CU (p. 8, line 31-p. 9, line 4, where WO'881 discloses handover from old cell to a new cell; Fig. 1). WO'881 in additionally discloses said protocol entities of the first CU and protocol entities of the third CU associated with the new second CU exchange at least one negotiation message containing a value for said parameter (p. 12, line 25-27).

Claim 29 discloses a system with the same limitations of claim 1.

Regarding claim 2, WO'881 discloses the former second CU was associated with a third CU of a first type and the new second CU is associated with a third CU of a second type (p. 8, line 31-p. 9, line 4, where WO'881 discloses handover from old cell to a new cell; Fig. 1).

Regarding claim 5, WO'881 discloses the first CU is a mobile station (Fig. 1), the second CUs are Base Transceiver Stations (Fig. 1), and the third CUs are Mobile Switching Centers (Fig. 1).

Regarding claim 6, WO'881 discloses the third CU of the first type is a MSC of a mobile network operated according to the UMTS standard (p. 12, line 11-13), and the third CU of the second type is a MSC of a mobile network operated according to the GSM standard (p. 12, line 11-13).

Regarding claim 7, WO'881 discloses the protocol is circuit switched (p. 12, line 11-13).

Regarding claim 12, WO'881 discloses the former second CU is a second CU of a first type and the new second CU is a second CU of a second type (p. 8, line 31-p. 9, line 4, where WO'881 discloses handover from old cell to a new cell; Fig. 1).

Regarding claim 13, WO'881 discloses in the exchange of negotiation message, the protocol entity of the third CU associated with the new second CU transmits a negotiation message containing a value for said parameter to the protocol entity of the first CU (p. 13, line 4-5; line 20-23).

Regarding claim 16, WO'881 discloses the first CU is a mobile station (Fig. 1), the second CUs are Base Transceiver Stations (Fig. 1), and the third CUs are Mobile Switching Centers (Fig. 1).

Regarding claim 21, WO'881 discloses the protocol is circuit switched (p. 12, line 11-13).

Regarding claim 26, WO'881 discloses negotiation of parameters for use in the operation of a protocol that controls data transmission between first Communication Units (CU) and third CU via second CUs (Background of the Invention, where WO'881 discusses standards; Summary of the Invention; p. 13, line 20-23). WO'881 discloses the protocol is operated by protocol entities in the first and third CUs (p. 3, line 4-8). A first CU is always associated with a second CU and the second

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CU is always associated with a third CU at a time (a mobile always associated with a base station and the base station always associated with a (Mobile Switching Center) MSC at a time). WO'881 discloses there exist second CUs of at least a first and second type and third CUs of at least a first and second type that require different choices of said parameter (p. 7, line 13-p. 8, line 22). WO'881 discloses in the case that it is possible that an association of said first CU with a second CU that is associated with a third CU of a first time may be change to an association of said first CU with a second CU that is associated with a third CU of a second type (p. 8, line 31-p. 9, line 4, where WO'881 discloses handover from old cell to a new cell; Fig. 1), the protocol entities of the first CU and the protocol entities of the third CU of the first type perform the step of exchanging at least one negotiation message containing a value for said parameter prior to said change of association (p. 13, line 20-23).

Claim 30 discloses a system with the same limitations of claim 26.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 8,14,22,23,and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO'881 in view of WO 02/25888, hereinafter WO'888.

Regarding claims 8 and 22, WO'881 discloses the limitations of claim 7 and 12 as applied above. WO'881 lacks the protocol is a Radio Link Protocol. WO'888 discloses a method for handling non-transparent data calls by the use of a Radio Link Protocol (RLP) to provide error-free data transmission (p. 1, paragraph 2). It would have been obvious to one having ordinary skill in the art at the time of the invention to combine the method of negotiation of system parameters as disclosed by WO'881 with the RLP disclosed by WO'888 such that the data transmission for the handoff process can be error-free.

Regarding claim 14 and 25, WO'881 discloses the limitations of claim 13 as applied above. The reference lacks the value for the parameter depends on the transmission characteristic of the transmission medium related to transmission delay between the new second CU and its associated third CU and the value can be determined by the third CU for each of the second CUs it can be associated with. WO'888 discloses "when the XID proxy is initialised it can be fed a value for T1 max that is felt by the network or its operator to be sufficiently large to cope with transmission delays arising from the characteristics of the network or otherwise... the MSC according to the logic



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indicated above the XID proxy can ensure that the value set in the negotiation process is not smaller than the initially fed value.” (p. 10, last paragraph). It would have been obvious to one having ordinary skill in the art at the time of the invention to combine the method of negotiation of system parameters as disclosed by WO’881 with the determination of value for the parameter based on transmission medium characteristic disclosed by WO’888 such that the value of the delay timer is sufficiently large to cope with transmission delay.

Regarding claim 23, WO’881 discloses the limitations of claim 21 as applied above. The reference lacks the parameter define the value of an acknowledge timer that guards the re-transmission period after which the re-transmission of a not-acknowledged frame within a protocol with ARQ may be started. WO’888 discloses the parameter defines the value of an acknowledge timer (page 14, last paragraph where WO’888 discloses XIP frame). It would have been obvious to one having ordinary skill in the art at the time of the invention to combine the method of negotiation of system parameters as disclosed by WO’881 with the acknowledgement timer disclosed by WO’888 such that the retransmission can be provided after the timer timeout.

Claims 9,15 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO’881 in view of 3GPP TS 24.022 version 5.1.0 Release 5 (hereinafter TS 24.022).

Regarding claim 9 and 24, WO’881 discloses the limitations of claim 7 as applied above. WO’881 fails to disclose the parameter defines the value of a resequencing timer that guards the difference between the delays of frames transmitted on different physical links within a multi-link protocol. TS 24.022 discloses a re-sequencing timer (T4) as a XID parameter (p. 14, Table 1). TS 24.022 further discloses “a multi-link version frames may be received out of sequence due to different transmission delays. The period of timer T4 guards the re-sequencing period” (p. 21, 5.5.6). It would have been obvious to one having ordinary skill in the art at the time of the invention to

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combine the method of negotiation of system parameters as disclosed by WO'881 with the re-sequencing timer disclosed by TS 24.022 so that RLP standard can be applied to the method of negotiation disclosed by WO'881 and defined the required connection parameters (see WO'881, p. 1, line 13-26, where WO'881 discusses standard and specification).

Regarding claim 15, WO'881 discloses the limitations of claim 13 as applied above. WO'881 further discloses a third CU determines a default value for the first CU (p. 6, line 13-16), and modifies the value of at least one parameter (p. 6, line 17-18). The reference lacks transmitting a negotiation message to the protocol entity of the third CU that is associated with the new second CU containing the same of a higher value for the parameter. TS 24.022 discloses method of negotiation of XID comprising "one side will start the process by sending an XID command, offering a certain set of parameters from the applicable parameter repertoire (see Table 1) the sending entity wants to negotiate proposing values within the allowed range. In return, the other side will send an XID response, either confirming these parameter values by returning the requested values, or offering higher or lower ones in their place" (p. 14, 5.2.2.6). It would have been obvious to one having ordinary skill in the art at the time of the invention to combine the method of negotiation of system parameters as disclosed by WO'881 with the method of exchanging XID disclosed by TS 24.022 so that RLP standard can be applied to the method of negotiation disclosed by WO'881 and defined the required connection parameters (see WO'881, p. 1, line 13-26, where WO'881 discusses standard and specification).

Claims 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO'881 in view of Musikka et al. (US 2002/0015392, hereinafter Musikka).

Regarding claims 17-20, WO'881 discloses the limitations of claim 16 as applied above. WO'881 further discloses one type of the second CU is a BTS that is connected to its associated

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MSC via a lower-delay network (GSM network) (p. 12, line 11-13). "GSM uses narrowband TDMA" (<http://www.webopedia.com/TERM/G/GSM.html>). WO'881 discloses the other type of the second CU is a BTS that is connected to its associated MSC via UMTS network (p. 12, line 11-13). The reference lacks the other type of the second CU is a BTS that is connected to its associated MSC via a higher-delay network based the Internet Protocol. Musikka discloses a BTS that is connected to its associated MSC via a higher-delay network based the Internet Protocol (paragraph 10-11, claim 7). It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the method of negotiation of system parameters as disclosed to include a BTS that is connected to its associated MSC via a higher-delay network based the Internet Protocol such that circuit-switching is not required and greatly simplifies the resolution of problems with existing BSS implementations (Musikka, paragraph 17).

#### ***Allowable Subject Matter***

9. Claims 3,4 and 27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel Lai whose telephone number is (571) 270-1208. The examiner can normally be reached on Monday – Thursday, 9:00 a.m. – 4:00 p.m., EST.

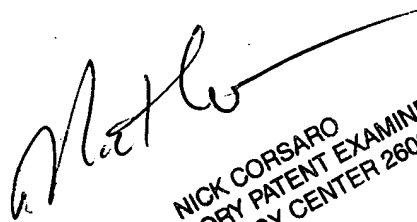
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nick Corsaro can be reached on (571) 272-7876. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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